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## PATENT SPECIFICATION

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## COMPLETE SPECIFICATION

## Filing and like Cabinets

We, RUBERY OWEN & Co. LIMITED, a British Company and LEONARD AUGUSTUS LAINSON BROWN, a British Subject, both of the Company's address, 5 Victoria Works, Booth Street, Darlaston, South Staffordshire, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

This invention relates to a filing or like cabinet of the progressive-opening type —i.e., one in which a drawer is fast on opposite sides with substantially horizontal slides each supported by rollers of an intermediate slide which is turn is supported by some of the rollers from a horizontal guide fixed to the adjacent wall of the cabinet, such that when the drawer is being pulled out the intermediate slide moves simultaneously at approximately half the drawer speed, having a travel of approximately half that of the drawer.

The main object of the present invention is to provide a simple and robust construction which will give very satisfactory service and can be inexpensively produced, and with this end in view the invention comprises various detail improvements in slides of this type.

According to the invention, the intermediate slide carries at its inner end a pivoted roller to engage beneath an upper flange of the associated fixed guide, and it also carries three pivoted rollers spaced along its length to engage upon (when the drawer is closed) a lower flange of the fixed guide, the drawer slide including upper and lower flanges of which the lower can engage upon (when the drawer is closed) the said three rollers, whilst the upper flange of the drawer slide engages beneath an intermediate wandering roller (the rolling movement of which is appropriately limited) which in turn engages beneath an upper flange of the intermediate slide.

The invention further consists in a filing or like cabinet, of the type specified,

having drawer slide and intermediate 50 slides arranged as aforesaid.

In the accompanying drawing Figure 1 is an elevation, with portions shown in section, of a stationary guide for a filing or like cabinet, of the progressive-opening 55 type, fitted with an intermediate slide according to the invention;

Figure 2 is an elevation of the intermediate slide alone; and

Figure 3 is a cross-section of the guide, the intermediate slide and a drawer slide according to the invention, the section being to a much larger scale than the elevational views of Figures 1 and 2 and being taken on the line 3—3 of Figure 1. 60

The drawing shows part of the cabinet wall at 11 to which is detachably secured a substantially horizontal guide 12 by any usual means. Thus, the cabinet wall may be formed with eyes or other indentations detachably to receive appropriate projections formed on the guide 12, the latter then being secured in position as by means of a single rivet or screw. The guide may be formed from an appropriate 75 length of steel strip by a rolling and/or pressing operation.

Figure 3 also shows part of a drawer 14. This is supported on opposite sides by similar drawer slides 15 each of which has vertically spaced portions 16, 17 secured to the adjacent parts of the drawer by welding, as indicated at 18, or in other ways. The portions 16, 17 are spaced from one another by substantially parallel upper and lower flanges 19, 20 integrally joined by a strip portion 21 which, for strengthening purposes, is folded-back on itself at 22. The drawer slide 15 is formed from an appropriate 90 sheet-metal strip by a rolling and/or pressing operation.

Each of the drawer slides 15 is supported by an intermediate slide 24 both of which are similar to one another. Each 95 has an upper flange 25 with a bent-back edge 26 which extends along the main length of the slide, and at the inner end

of the slide a relatively short flange portion 27 and, on the inner extremity, a slightly higher flange portion 28, which is perforated to enable a pivoted roller 29 to extend through it and engage beneath an upper flange 30 of the stationary guide 12. The flange 30 has a turned-down edge 31 which serves for maintaining the slide 24 within the guide 12. The guide also has an internal end flange 32 limiting the inward movement of the slide 24. The outwardly sliding motion of the slide 24 is limited by the edge 33 of the flange 28 engaging against a stop 34 pressed down from the flange 30 of the guide 12.

The flange 25 and turned-back edge 26 of the slide 24 are set slightly forward relatively to the plane of the main wall 36, as indicated at 37, and this set-forward portion is provided with a set-back groove 38 with which coacts a central, conical projection 39 on a floating or wandering roller 40 which is thereby located so as to be capable of movement between stops 41, 41 pressed in from the turned-back edge 26. The floating roller 40 engages upon the upper flange 19 of the drawer slide 15 and beneath the upper flange 25 of the intermediate slide, and when the drawer is pushed fully into the cabinet the inner end of the upper flange 19 of the drawer slide additionally engages beneath the roller 29.

The intermediate slide 24 is also provided with a lower flange 43 having a turned-back edge 44, and the latter and the main portion 36 carry pivot pins for three rollers 45, 46 and 47 which are spaced along its length and which extend through openings in the flange 43 to engage a lower flange 48 fast with the guide 12, the lower flange having a turned-back edge 49 for lateral locating purposes.

For a given size of guides and slides the roller 45 is conveniently of a diameter of  $1 \frac{1}{32}$ ", the rollers 29 and 46 each of a diameter of  $1 \frac{1}{16}$ " i.e., slightly larger than the roller 45, and the roller 47 of a diameter 1", i.e., slightly smaller than the roller 45.

The roller 46 coacts with the wandering roller 40 for the support of the drawer slide 15 when the drawer is not fully closed, and for this purpose the roller 46 has clearance on its pivot pin.

Assuming that the drawer is closed, when it is pulled out the weight of the drawer is initially taken by all three rollers 45 to 47 engaging the underside of the lower flange 20 of the drawer slide 15, and the drawer slide is prevented from tilting by engaging the wandering roller 40, as aforesaid. When the drawer is

fully out the inner end of the drawer slide 15 is still engaged between the rollers 40, 46. It will be observed that the roller 40 is substantially co-planar with the supporting rollers 45, 46 and 47, and in this way any shearing action is avoided.

The intermediate slide moves simultaneously outwardly when the drawer is pulled out at approximately half the speed of the drawer, and it has approximately half the travel of the drawer. That is to say, its stop, formed by the edge 33, engages the stop 34 just as a stop (not shown) near the inner end of the drawer engages a pivoted stop 51 on the intermediate slide, the drawer stop passing above the flange 30. If the drawer is to be fully removed, i.e., detached, the pivoted stop 51 is raised by depression of its tail 52 to allow the drawer stop to pass beneath. If it be desired to remove the intermediate slide, then it is only necessary to raise the outer end of the intermediate slide thereby to depress the edge 33 below the stop 34.

It is usual practice to provide cross-members engaging the two intermediate slides 24 associated with each drawer.

The lower guide flange 48 is shown as having a slight depression 54 positioned to receive the intermediate roller when the drawer is fully closed, thereby lightly to locate the drawer in the closed position.

It will be observed that by the invention three main parts, mainly, the guide 12 and the two slides 15 and 24, are all formed from metal strip, as by a pressing or rolling operation, and that no welding is necessary, in consequence of which their production can be carried out very economically. The guide 12, as stated, can be detachably secured to the cabinet wall and the intermediate slides then entered into the associated guides and the drawer slides, secured to the drawer, into the intermediate slides, by which means assembly can be quickly effected.

The parts move very freely and can be made very robust so that long life is thus assured.

Having now particularly described and ascertained the nature of our said invention and in what manner the same is to be performed, we declare that what we claim is:—

1. For a filing or like cabinet of the progressive-opening type, and intermediate slide carrying at its inner end a pivoted roller to engage beneath an upper flange of the associated fixed guide, and also carrying three pivoted rollers spaced along its length to engage upon (when

the drawer is closed) a lower flange of the fixed guide, the drawer slide including upper and lower flanges of which the lower can engage upon (when the drawer is closed) the said three rollers, whilst the upper flange of the drawer slide engages beneath an intermediate wandering roller (the rolling movement of which appropriately limited) which in turn engages beneath an upper flange of the intermediate slide.

2. For a filing or like cabinet of the progressive-opening type, an intermediate slide arranged substantially as described with reference to the accompanying drawings.

3. A filing or like cabinet of the progressive-opening type having an intermediate slide arranged according to Claim 1 or 2.

4. A filing or like cabinet of the progressive-opening type, in which the drawer slide is arranged substantially as described with reference to the accompanying drawings.

Dated this 30th day of September, 1947.

WALFORD & HARDMAN BROWN.

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[This Drawing is a reproduction of the Original on a reduced scale.]

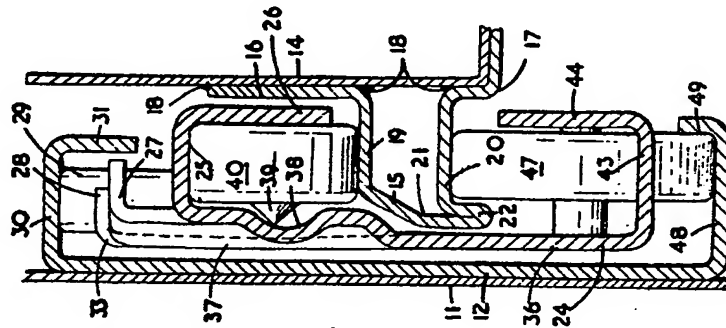


FIG. 3

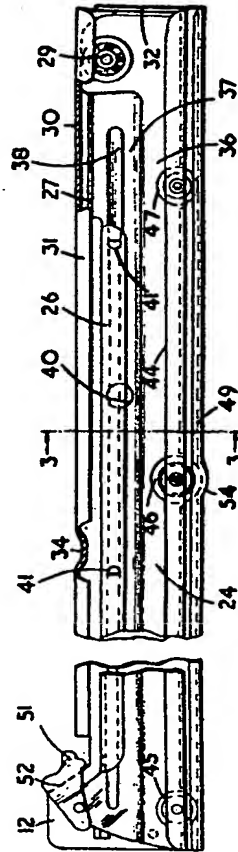


FIG. 1

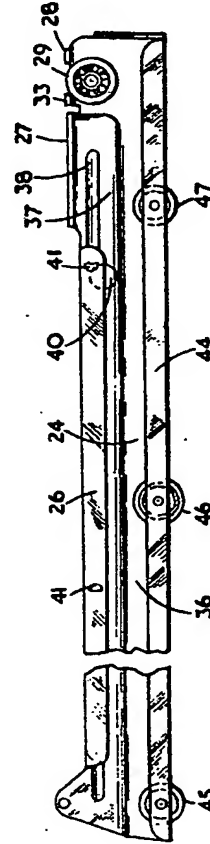


FIG. 2

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